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ABSTRACT

The use of photography as an evaluation and research tool is discussed, with an emphasis on an evaluative study of the ESSENCE environmental science curriculum project. The camera was used in site-visits in an attempt to portray the workings of the project and to convey a meaningful understanding of the curriculum as it was actually used in the schools. The use of the camera in the science curriculum project is also discussed. The students were given cameras and assignments to take pictures of something invisible, natural occurences, or double exposures portraying some change. In this way, the camera was used to focus student attention on a specific problem or issue, to frame specific actions to the exclusion of others, and to record how things change and/or remain the same. The issues and problems surrounding the use of photography as an evaluation tool are discussed. (Author/JAC)

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THE CAMERA AS AN EVALUATION AND RESEARCH INSTRUMENT:

SNAPSHOTS OF A SCIENCE CURRICULUM

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Introduction

This paper is in two parts. The first section will deal with the use of photography in an actual evaluation study. It will be a loosely stated case-study of how one evaluator was able to utilize the camera in several related but distinct ways. This section is written after the fact - with the evaluator reflecting upon his use of the camera during a series of on-site evaluation visits. Many of the thoughts in this reflection have been influenced by Susan Sontag's book On Photography and the author owes a great debt to Sontag for articulating some of the questions and issues that are related to this paper and which should have an impact on the use of the camera as an evaluation or research tool.

The second section of this paper will discuss some of the broader issues that are raised with regard to the use of the camera as a research tool. These issues will focus on some of the possible limitations and advantages that should be considered when using the camera as an evaluation tool and a reporting medium.

Overview

In 1976, a team of evaluators from Syracuse University's Center for Instructional Development attempted to meaningfully describe and portray the workings and characteristics of a National Science Foundation funded curriculum known as ESSENCE or Environmental Studies. This curriculum presented a unique challenge to the evaluation effort because it claimed to be free of specified behavioral objectives and even went so far as to state that "Evaluation raises hell with trust." This challenge was heightened because ESSENCE also claimed to be content-free. Its goal, if we can say that it had one, was to introduce children to the process of inquiry; content was viewed as a vehicle for this process.

After reviewing the ESSENCE materials, it was felt that the best way to approach ESSENCE would be portrayal - the telling of the story of ESSENCE. We

hoped this would provide the client - the Director of the Environmental Studies Institute at Syracuse University - with a meaningful understanding of the curriculum as it was actually used in the schools. Therefore, the aim of our inquiry was primarily description. We attempted to make no claims of merit per se. Rather we hoped to capture the various characteristics and activities of ESSENCE as we discovered them so that those who were not present when these actions were taking place might still be able to share our appreciation of some of their meanings. This would enable the client to come to his own conclusions and make his own judgments.

We decided early in our planning that we would use a camera as one of several instruments for the site-visits in order to capture and portray what ESSENCE was like in real classrooms, with real teachers and real students. The study consisted of three major components: site-visits to schools where ESSENCE was or had been used; a separate review of the literature on affective education that we hoped would link our observations with the research literature; an extensive questionnaire sent to participating teachers and administrators to be responded to in writing or on an enclosed cassette cartridge. The camera was used in the site-visits.

The notion of using a camera as one of our research tools was reinforced by some of the ESSENCE activities which we were probing. One of the more highly-touted activities of the ESSENCE curriculum was the use of a Polaroid camera by the students as a tool of inquiry. The students were given Polaroid cameras with the assignment of "take a picture of something invisible," or "take a picture that is some positive evidence that something natural happened," or "go outside and take a picture of power," or "take a double exposure that portrays some change." ESSENCE purported to be a process of inquiry, and the camera was

viewed as instrumental in this process. It focused student attention on a specific problem or issue. It framed specific actions to the exclusion of others. It recorded how things change and/or remain the same.

Because the evaluation team was uncertain as to what to expect while conducting our study of ESSENCE we adopted a certain ESSENCE point of view. This point of view stressed process rather than specified outcome, openness to whatever or wherever the study lead, and a willingness to deal with a certain amount of uncertainty as our inquiry unfolded. Therefore, we decided to use the camera as an instrument for focusing on specific issues, and as a means of visually recollecting some of those myriad events and activities that were witnessed during a hectic three weeks of site-visits. And, most importantly, we hoped that what was captured on film would be useful to the client in better understanding some of the very complex and unique characteristics of ESSENCE and the people who utilized it.

Three Uses of Photography in the Portrayal of a Science Curriculum

Because our knowledge of what ESSENCE comprised was very vague, the camera initially functioned as a means of framing and isolating certain actions and events. The use of the camera as a means of focusing upon one specific event or activity during the site-visits was a value-laden act in itself. Implied in the photographs of the site-visits is the assumption that what was photographed was somehow worth considering as a small but isolated portion of our portrayal study.* The camera forced the site-visitor to, at least momentarily, focus his attention on a specific activity. In what could loosely be described as a goal-free evaluation the camera became an instrument of goal-seeking, helping the site-visitor search

* Stephen Kemmis speaks to this issue briefly in "Telling it Like it is: The Problem of Making a Portrayal of an Educational Program, January 1974, University of Illinois, Champaign-Urbana, (mimeograph).

out patterns and look for order in the seemingly unordered activities going on continually around him. From the very beginning, the site-visitor was compiling a series of individual images - both mentally and photographically which would, much later in the study, be pieced together to tell the story of ESSENCE. Just as the Polaroid cameras were used by the students to focus their questions, their inquiry, the site-visitor utilized his camera (Olympus 35RC) to bring order and clarity of value to his study. This was especially important in the early stages of the study when we were never certain what to expect from ESSENCE or even what questions to ask about it.

This ordering was vital to our study because we understood from the beginning that ESSENCE, because it concerned itself more with process than product, could mean many things to different people. Our objective was to portray, in the most meaningful way possible, "A Story of ESSENCE." The emphasis in this title must be put on the article "A" - because we were convinced that what we were portraying was but one of a number of stories that could be written about this National Science Foundation curriculum project. The camera was one way events and activities were singled out and isolated and then pieced together to recreate one of many possible stories that would accurately and adequately portray ESSENCE.

The camera was also used as a primary mnemonic device, along with a portable tape-recorder, to aid in the site-visitor's later recollections of what he observed during his visits. This took some of the burden off the evaluator in terms of trying to keep track of the many happenings that he experienced during his visits. The camera and the tape-recorder almost completely replaced note-taking in the site-visits, thus leaving the site-visitor free to more readily "grasp the insider's view of the program" (Kemmis, 1974): asking probing questions of

teachers and learners; watching for subtle interactions between teachers and children as well as between children and children; and trying to understand the total curriculum without fear of missing some of its more specific components.

There is a sense of professional well-being in knowing that one is collecting as much usable evidence as possible in any evaluation study. This was particularly true in the site-visitor's observations of ESSENCE in action. Not knowing beforehand what to expect, it was comforting to know that data (in the form of taped conversations and photographs) were being accumulated, and that these data would be helpful, in fact necessary, in piecing together a story, an adequate portrayal of this curriculum. Like the atomic physicist trying to capture images of subatomic particles, we could only speculate about what we would find - but were confident that if there were something to capture on film, we would discover it. And like the physicist, we were very aware that we might not fully understand whet it was we were observing until well after the study's on-site observations were completed. The photographs taken during the visits to the schools were a form of insurance that guaranteed that the site-visitor would have something to say about what he "saw" during his travels. The camera was his guarantee that he would not forget the obvious - that those small details that give meaning to the total picture would not be omitted.

Although the camera was utilized both as a means of focusing on specific action and as a memory back-up device, we felt from the beginning of the study that good photographs of the curriculum in practice would enhance our study of ESSENCE. We hoped to make our report as descriptive as possible and we did not want to rely solely on words. To paraphrase the photographer Lewis Hine - if we felt we could tell the story in words alone, we wouldn't have needed to lug a camera around (Sontag, 1977). The ESSENCE study is a story of words. It is a story about people

young and old, together engaging in the activity of teaching and learning. "The Story of ESSENCE" relies heavily on the real words of real people - but where it was possible, photographs were used to illustrate the objects of conversation and to heighten the worded story. Thus, the camera was a most helpful tool in helping us report our findings to the client in a way that was both factually informative and meaningful. Although the photographs by themselves are only isolated images, mere bits and pieces of evidence, when they were paired with certain conversations or used to illustrate particular circumstances, we believe they added depth and human feeling to the report. There were several instances when it was felt that the photographs led to a better understandign of a conversation that was taking place or a unique activity that was happening.

When the taped conversations and photographs are used together they take on a reality themselves, a reality that may be greater than the sum of each taken separately. This reality is basically independent of the recorder even though it is his point of view that informs what questions are to be asked and what segments of visual reality are to be captured on film. This marriage of photography and taped conversation gives the client a sense of autonomy in his judgments and decisions. He becomes a vicarious participant in the events that have taken place and is freed from his reliance on the verbal interpretation of the event through a mediating voice. The use of photographs especially in portrayal-type evaluations allows the client to come to more informed conclusions, to make his own decisions about the worth of a program, curriculum, or other activity. Without dealing with the question of the subjectivity or objectivity of the photography in evaluation research, the camera can help the client in better verifying his own opinions about the findings and recommendations of an evaluation report. Photographs are additional types of evaluation evidence, and if they are not used surreptitiously and deemed admissable within the particular context of the evaluation study they

can add a sense of visual validity to more traditional modes of evaluation.

Issues and Problems Surrounding the Use of Photography as an Evaluation Instrument

In the previous section the usefulness of the camera as an evaluation tool was briefly, but positively discussed. This raises some questions as to how different the camera is from other evaluation tools - for example statistical analysis. In fact, statistical analysis and the use of photographs in evaluation research may be analogous - both focus upon one event or activity to the exclusion of others; and both have a quasi-mystical fascination for some people who see both as some symbolic representation of "Truth" or reality.

The fact that photography is but a tool in the evaluation process can not be underplayed. It is instrumental in achieving other ends (description, determination of worth, reasonable decisions) and is not an end in itself. One uses a shovel to dig a hole; and unless one is a craftsman or tool designer, the type and design of the shovel are relevant only in so far as they fit the needs of the job to be done. The camera will sometimes fit the needs of the job to be done, sometimes it won't. We have been warned by Robert Stake that evaluators "should choose methods to fit the issues, even if forced then to employ weaker and less respectable methods" (Stake, 1977). The evaluation team who compiled the data for "A Story of ESSENCE" and the client for whom it was done, felt that in this case the use of the camera was a "respectable method." However, in another situation, at another time, another method, a different tool might be more appropriate.

The fact that the camera excludes some activities to the inclusion of others is not a positive or negative aspect in itself. Rather, it is how we deal with this limitation that makes it relevant to evaluation research. The site-visitor of the ESSENCE study believed that the act of focusing on some events and excluding others was a valuable endeavor in bringing an initial sense of order to a seemingly disordered array of events. The benefit of focused specificity in this case was

seen as a necessary beginning to the formulation of an adequate overview of the curriculum. The problem at issue here is how much specific focus is enough to pick out the important components of a program and how much is too much - so that the total overview is lost in obscure detail. Again it is Robert Stake who best articulates this question "What is more important: to tell of some very special things about the program or to provide the most veridical portrayal of the program?" (Stake, 1972). Stake advocates the latter. Is it possible that the prudent use of photography as an evaluation tool might enable evaluators to do both - tell some special things about a program without detracting from the overall portrayal of that program? It is not so much that "special things about the program" necessarily detract from its "most veridical portrayal" - rather it is the perseveration of the evaluator with these "special things" that cloud and distort meaningful program portrayal. This can be said about any evaluation method or tool that is seen as an end in itself rather than an instrument to another more informative, value-based end.

It is this infatuation with the tools of the evaluation trade rather than with process of valuing itself, that must be avoided. The camera does not seem to offer any great panacea to the problems of evaluation research. It does offer a novel point of view to the field. But just as the limitations of a complex statistical analysis or research design must be kept up-front in evaluation research - so too the limitations of the camera must be fully explored and dealt with.

Because the number of photographs that can be taken is virtually unlimited, photography reinforces a segmented view of reality as consisting of small, separate units of an apparently infinite number. This makes the world more manageable because the photographer or the viewer deals with only one aspect of reality - one separate photograph - at a time (Sontag, 1977). It was this manageable nature

of photography which aided the ESSENCE site-visitor - bringing order to the initial stages of the study.

The individual photographs only showed how separate and distinct parts of the curriculum looked. They did not show how it functioned (Sontag, 1977). How something functions implies action and time is a necessary condition of action. Individual photographs of ESSENCE did not, by themselves, have the power to meaningfully convey the workings of the curriculum over time, even when the photographs were viewed as a group. It was the narrative quality of the taped conversations which placed the activities of ESSENCE (and the photographs) within the context of time. Narrative deals with time and action over time. It is only within the context of time that we can talk meaningfully of process. An evaluation study that stresses process must deal with action over time. Narrative, therefore, becomes a necessary condition of any process-oriented evaluation.

Photography and the discriminate use of the camera have a great potential as useful and informative evaluation tools. The evaluation profession must make certain that these tools are not elevated to ends in themselves - but rather that they be seen, and remain to be seen, as only tools in the growing repertoire of the evaluator. Photography can aid the evaluator in focusing inquiry and collecting data. But the ends of evaluation, determination of merit or worth, the making of rational decisions, and the describing of events and activities must not be prempted by the tools which serve those ends.

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